REMARKS

This Reply is submitted in response to the Office Action mailed June 2, 2008. Claims 1-16 and 33-42 remain pending in the application and stand rejected. Reconsideration of the rejections is respectfully requested in view of the following remarks.

Claims Rejected Under 35 U.S.C. §103

Claims 1-6, 8-13, 15, 16, 37-40, and 42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,089,413 to Riney et al. in view of U.S. Patent No. 4,200,207 to Akers et al. Claims 1, 11, and 37 are the only independent claims of this rejected group. Claims 1 and 11 are directed to methods of applying liquid to a substrate, and each recites:

> preventing backflow of liquid from the recirculation path to the dispensing module when the dispensing valve is cycling from the open condition to the closed condition and the pressure of the liquid in the recirculation path is greater than the pressure of the liquid in the dispensing path. (Emphasis added.)

Applicants respectfully traverse the rejections of claims 1 and 11 because Riney '413 fails to disclose each and every element recited in claims 1 and 11, and Akers '207 fails to cure this deficiency. Specifically, the Examiner admits that Riney '413 lacks a check valve in a recirculation path that would prevent backflow to the dispensing module. (Office Action at page 2.) Akers '207 also fails to teach or suggest a check valve that prevents backflow of liquid from a recirculation path to a dispensing module.

Specifically, pressure relief valve 9 of Akers '207, cited by the Examiner, is disposed in manifold block 125 and does not prevent backflow of liquid from a recirculation path to a dispensing module. Close inspection of FIGS. 1 and 2 of Akers '207 shows that pressure relief valve 9 is not the a path 26a where liquid could possibly backflow to the dispenser 26. Rather, pressure relief valve 9 is positioned in a recycle line 27 "between the outlet side 24 of second stage pump 12 and the inlet side 17 of first stage pump 11." (Akers '207 at col. 4, lines 33-39.) Pressure relief valve 9 is therefore configured to prevent excess pressure at the inlet side of the dispenser 26, by rerouting the excess pressure flow into recycle line 27, and does not prevent backflow from the recirculation path to the dispenser.

Variable restrictor 28 in the return hose or line 26a from dispenser 26 also is not a check valve and does not prevent backflow of liquid, as set forth in claims 1 and 11. Rather, the variable restrictor 28 restricts, but does not prevent, backflow of liquid from a recirculation passageway to the dispensing module, as set forth in the claims. For at least these reasons, Applicants respectfully request that the rejections of claims 1 and 11 be withdrawn.

Independent claim 37 is directed to an apparatus for applying liquid to a substrate and recites:

> a dispensing module including an inlet coupled in fluid communication with said distribution passageway and a recirculation outlet coupled in fluid communication with said recirculation passageway, said recirculation outlet and said recirculation passageway defining at least a portion of a recirculation path extending to said supply channel; and
>
> a check valve positioned in said recirculation path and

> configured to prevent backflow of the liquid within said recirculation path (emphasis added).

Applicants respectfully request that the rejection of claim 37 be withdrawn because Riney '413 wholly fails to teach or suggest a check valve, and because Akers '207 fails to teach or suggest a check valve in a recirculation path that includes a recirculation outlet in a dispensing module, as discussed above.

Claims 2-6 and 8-10 each depend from independent claim 1; claims 12, 13, 15, and 16 each depend from independent claim 11; and claims 38-40 and 42 each depend from independent claim 37. Accordingly, claims 2-6, 8-10, 12, 13, 15, 16, 38-40, and 42 are each in condition for allowance for at least the same reasons discussed above with respect to claims 1, 11, and 37, and Applicants respectfully request that the rejections of these claims also be withdrawn.

Claims 7, 14, 33-35, and 41 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Riney '413 and Akers '207, in further view of U.S. Patent No. 5,523,682 to Leon. Claim 36 stands rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Riney '413, Akers '207, and Leon '682, in further view of U.S. Patent No. 4,543,649 to Head et al. Claim 33 is the only independent claim of this rejected group and is directed to a method of applying liquid to a substrate, including:

> returning the liquid from the dispensing module to a recirculation path in the manifold while the dispensing module is in the recirculating condition;
>
> preventing backflow of liquid from the recirculation path to the dispensing module when the dispensing module is cycling from the open condition to a closed condition and the

> pressure of the liquid in the recirculation path is greater than the pressure of the liquid in the dispensing path; and
>
> sending a signal to a control coupled with the dispensing module indicating that the dispensing module is in the recirculating condition.

Applicants respectfully traverse the rejection of claim 33 for at least the same reasons discussed above with respect to claim 1, and because Leon '682 and Head '649 fail to cure these deficiencies. Specifically, neither Riney '413 nor Akers '207 discloses preventing backflow of liquid from a recirculation path to a dispensing module, as set forth in claim 33 and discussed above with respect to claim 1. Leon '682 and Head '649 also do not disclose preventing backflow of liquid from a recirculation path to a dispensing module.

Applicants further traverse the rejection of claim 33 because neither Riney '413 nor Akers '207 teaches or suggests "sending a signal to a control coupled with the dispensing module indicating that the dispensing module is in the recirculating condition." Leon '682 is directed to a system that determines the position of an electrically conductive element movably positioned in a housing, but does not teach or suggest sending a signal to a control coupled to a dispensing module to indicate that the dispensing module is in a recirculating condition, as set forth in claim 33. For at least these reasons, Applicants respectfully request that the rejection of claim 33 over the combination of Riney '413, Akers '207, and Leon '682 be withdrawn.

Claims 34-36 and 41 each depend from independent claim 33 and are therefore in condition for allowance for at least the reasons discussed above with respect to claim 33. Accordingly, Applicants respectfully request that the rejections of claims 34-36 and

41 over the combinations of Riney '413 and Akers '207 with Leon '682 and Head '649 be withdrawn.

Claim 7 depends from independent claim 1, and claim 14 depends from independent claim 11. Accordingly, Applicants assert that claims 7 and 14 are each in condition for allowance for at least the reasons discussed above with respect to independent claims 1 and 11, and because the further combination of Riney '413 and Akers '207 with Leon '682 fails to cure the deficiencies of Riney '413 and Akers '207 discussed above. For at least these reasons, Applicants respectfully request that the rejections of claims 7 and 14 over the combination of Riney '413 and Akers '207 with Leon '682 be withdrawn.

Conclusion

In view of the foregoing remarks, Applicants believe this case is in condition for allowance and respectfully request allowance of the pending claims. If the Examiner believes any issue requires further discussion, the Examiner is respectfully asked to telephone the undersigned attorney so that the matter may be promptly resolved. The Examiner's prompt attention to this matter is appreciated.

Applicants do not believe that any fee is due in connection with this submission. However, if any fees are necessary to complete this communication, the Commissioner may consider this to be a request for such and charge any necessary fees to Deposit Account No. 23-3000.

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Respectfully submitted,

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